

In the Claims:

1. (Currently Amended) A drive mechanism interposed between two members to make said two members move relatively with respect to each other, at least one of said two members being guided to move linearly in a linear moving direction, said drive mechanism comprising:

a plurality of rolling cam followers that are rotatably supported on one of said two members, that are arranged in said linear moving direction, and that are spaced from each other; and

a cam that is rotatably supported on the other one of said two members and that is provided in its circumference with a cam groove in which said rolling cam followers engage, said cam groove being defined by a pair of inner side surfaces opposing each other and a bottom surface connecting said side surfaces, the rotation axis of said cam being arranged in the direction of said linear moving direction;

wherein said two members are made to move relatively with respect to each other by driving said cam to rotate and making said rolling cam followers engage successively in said cam groove and move in the direction of said rotation axis, two adjacent ones of said rolling cam followers being engaged in said cam groove simultaneously,

wherein said two adjacent rolling cam followers roll on respective ones of said opposed inner side surfaces of said cam groove.

2-10. (Canceled)

11. (New) A drive mechanism according to claim 1, wherein said rolling cam followers are arranged at alternate long pitches and short pitches, the difference in length between said long pitches and said short pitches being substantially two times a backlash of said drive mechanism so that said two adjacent rolling cam followers roll on respective ones of said opposed inner side surfaces of said cam groove.

12. (New) A drive mechanism according to claim 1, wherein said rolling cam followers are arranged at equal pitches, a helical shape of the cam groove varying so that said two adjacent rolling cam followers roll on respective ones of said opposed inner side surfaces of said cam groove.

13. (New) A drive mechanism according to claim 1, wherein:
both ends, in the direction of said rotation axis, of said cam are supported rotatably;
said cam groove is formed in the circumference of said cam throughout the length, in the direction of said rotation axis, of said cam;

said cam groove is a helical groove oriented toward one direction in the circumferential direction of said cam; and

before a cam follower that is engaged in said cam groove disengages from said cam groove, an adjacent cam follower engages in said cam groove.

14. (New) A drive mechanism according to claim 13, wherein said length, in the direction of said rotation axis, of said cam is set shorter than a stroke of the linear movement of said member.

15. (New) A drive mechanism according to claim 1, wherein:
a plurality of said cam followers are arranged in said linear moving direction to form a cam follower row; and

at least two of these cam follower rows are aligned next to each other in said linear moving direction.

16. (New) A drive mechanism according to claim 1, wherein:
said cam groove is a tapered groove in which the width of the groove narrows toward the bottom in depth; and

said cam followers have a tapered cylindrical shape conforming to said tapered groove.

17. (New) A movable table unit comprising said drive mechanism according to claim 1, wherein:

one of said two members that rotatably supports said cam followers is a base fixedly installed on a floor; and

the other one of said two members that rotatably supports said cam is a table supported on said base to move linearly and relatively with respect to said base.

18. (New) A multiple movable table unit, comprising a plurality of movable table units according to claim 17, wherein the plurality of movable table units are stacked in multiple layers so that said movable table units move with respect to each other in different directions.